CASE STUDY OF SAFETY MANAGEMENT IN CONSTRUCTION INDUSTRY

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the Bachelor Degree of Civil Engineering

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Kadar kemalangan yang tinggi dalam pembinaan adalah masalah yang perlu ditangani oleh semua pihak yang terlibat (Poon et al. 2008). Walaupun peraturan dalam keselamatan dan kesihatan pekerjaan di Malaysia agak komprehensif dan dengan pemeriksaan keselamatan yang ketat oleh Jabatan Keselamatan dan Kesihatan Pekerjaan Malaysia (DOSH) secara berkala, kemalangan dan kematian masih dalam jumlah yang tinggi. Industri pembinaan menghadapi cabaran dalam keselamatan yang kurang baik yang boleh menyebabkan kecederaan dan kematian disebabkan oleh sikap tidak beretika dan faktor tingkah laku. Objektif kajian ini adalah untuk mengkaji isu-isu keselamatan yang berlaku dalam industri pembinaan, untuk mengenal pasti punca utama isu keselamatan yang berlaku dalam industri pembinaan dan untuk menganalisis penyelesaian untuk mengatasi isu-isu dalam pengurusan keselamatan. Kajian ini dijalankan melalui tinjauan literatur dan kajian soal selidik untuk mencapai objektif kajian. Maklumat yang berkaitan dengan pengurusan keselamatan dalam industri pembinaan telah diambil dari jurnal, internet dan buku terbitan. Soal selidik telah diedarkan kepada seramai seratus orang responden yang terlibat secara aktif dalam industri pembinaan di seluruh Malaysia. Melalui kajian ini, dapat dikenal pasti bahawa tiga isu utama dalam pembinaan adalah latihan dan pendidikan keselamatan yang tidak mencukupi, tidak semua orang mengetahui secara terperinci kandungan dasar keselamatan dan keadan di tapak pembinaan tidak dikemas dengan rapi. Untuk meminimumkan masalah ini, pengurusan atasan harus mewajibkan latihan keselamatan kepada pekerja yang bekerja di tapak pembinaan dan pegawai keselamatan harus memberikan nasihat tentang tindakan yang perlu diambil untuk memastikan persekitaran kerja yang lebih selamat.

ABSTRACT

High accident rate in construction is a universal problem which needs to be tackled by all parties concerned (Poon et al. 2008). Although regulation in occupational safety and health in Malaysia are quite comprehensive and reinforced with strict safety inspection and audit by Department of Occupational Safety and Health Malaysia (DOSH) at regular of time, the accident and fatality still at unacceptable figure. The construction industry in confront with a poor level of safety performance and dangerous safety issues that may cause injuries and death due to the major cause of unethical attitude and behaviour factors which leads to other problems occur in occupational safety and health. Objective of this study is to study the safety issues that happen in construction industry, to identify the major cause of safety issue that happen in construction industry and to analyse solution to overcome the issues in safety management. This study was carried out by literature review and questionnaire survey to achieve the objectives. The information related to the safety management in construction industry has been collected from journal, internet and published book. The questionnaire had been distributed to a total of one hundred respondents that are actively involved in construction industry all over Malaysia. Through this study, it can be identified that the Top three common issue in construction is insufficient proper training and education, not everyone aware of the contents of safety policy and site does not kept neat and tidy. In order to minimize the problem, top management must establish safety training and orientation for site operatives and safety officer's should provide advice on actions to be taken in order to ensure a safer working environment.

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AI	Average Index
DOSH	Department of Occupational Safety and Health
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment

CHAPTER 1

INTRODUCTION

1.1 Introduction

The construction industry is a dynamic and innovative industry that delivers buildings and infrastructure for all aspects of commercial and domestic activity. It is a global industry that facilitates the development and maintenance of buildings, transport links and energy supplies. It is an industry that continues to deliver many incredible things, from ever taller sky scrapers to expansive bridges, impressive stadia and structures that rise out of land reclaimed from the sea.

This dynamic and innovative industry is faced with safety challenges on a project-by-project and day-by-day basis. The need to systematically plan and organise for effective health and safety management practice is regularly underlined as no justification can be, or is, given to construction projects, work activities, environments or business organisations that place the safety or health of people at risk.

Many hazards exist on all construction sites: sharp edges, falling objects, openings in floors, chemical, noise and a myriad of other potentially dangerous situation. Mitigation measures are required to minimize the potential for injury and continued training is needed to ensure the entire work force maintains a work safely attitude.

Most construction projects are unique and executed in varied work environments. Construction workers, therefore, are constantly expected to familiarize themselves with new situations that potentially may be hazardous. In addition, the composition of construction project teams varies from project to project, and many craft worker may work for different employers leading to a lack of conformity and continuity. Craft workers may only work on a project site during certain phases of the work and then move to another project site. The continuing change in the composition of the work force on a

project presents significant leadership challenges to the project manager, superintendent and field supervisors.

Another major safety challenge for construction site supervisors is the increased employment of workers for whom English is a second language. Not only do these workers have difficulty reading and understanding safety signage, but they may be unwilling to report unsafe job site conditions or working practices. It is critical that the supervisors be able to enforce good safety practices among all individuals working on a job site. This may require that safety signage be posted in multiple languages and that safety orientations can be conducted in multiple languages.

As a construction projects are being executed, there is a continuous series of situations in which construction workers and/or general public may be exposed to risk of injury. It is extremely important for construction leaders to recognize these situations and take action to control or mitigate these job site hazards. Many construction operation occur in excavations below the surface ground or in the air above the ground. In many cases, construction activity is exposed to natural elements such as rain, wind or other climatic conditions. Implementing measures to protect workers and the public is the best way to minimize the potential for injury.

Construction work has been increasing in developing and undeveloped countries over the past few years. With an increase in this type of work occupational fatalities have increased. Occupational fatalities are individuals who die while on the job or performing work related tasks. Within the field of construction, it is important to have safe construction sites.

Creating a safe work site is a function of the physical conditions of the working environment and the behaviour or working attitude of the individuals working on the site. Safety planning must begin during the initial planning for a construction project along with the development of a cost estimate and project schedule. The initial safety plan needs to outline how safety will be managed on the project, including roles and responsibilities of project participants, resources available, anticipated hazards and mitigation measures, training requirements and safety equipment needs. Requiring everyone on the project site to wear appropriate PPE may impact worker productivity and the purchase of appropriate safety equipment may impact project cost.

1.2 Problem Statement

Although regulation in occupational safety and health in Malaysia are quite comprehensive and reinforced with strict safety inspection and audit by Department of Occupational Safety and Health Malaysia (DOSH) at regular of time, the accident and fatality still at unacceptable figure. The number of accidents in construction industry reported from 2012-2016 as shown in Figure 1.1. There's an increase of accident in 2016. However, there might be some accidents that might not be reported due to near miss. In addition to that there is no indicator established to measure the level of safety culture in construction sector in Malaysia. Although the construction sector in Malaysia is growing very fast, however workers at many construction sites, operate in unsafe working environment, hence there is a need to make construction sites safe in order to ensure the safety of the workers, if the construction sector is to have a sustainable growth and develop.

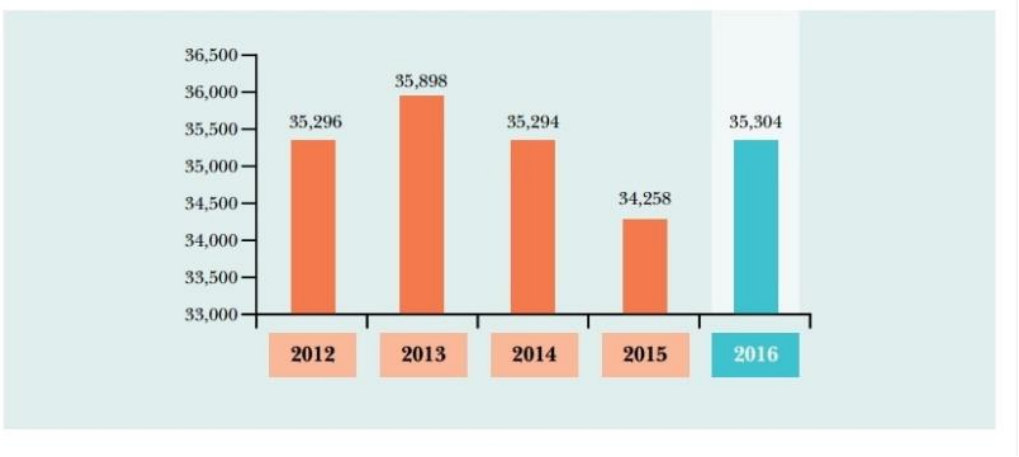

Figure 1.1 Industrial Accidents Reported from 2012-2016
Source : (SOCSO Annual Report,2016)

The understanding of the construction site's management on safety is in contrast to the regulation of occupational safety and health. Although cases were reported to related departments, yet information on the safety and health management in construction sites is still far lacking. The issue has to be fundamentally understood and comprehended. Awareness on safety and health is important and crucial for construction sector. The Occupational Safety and Health Act 1994 (OSHA) is a self-regulation statute. (Gunningham, 2011) defined self-regulation as the controlling of a process or activity by the people or organization that are involved in it rather than by an outside organization

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